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EXAMINER	
GOFF II, JOHN L	

ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,008	BUNCH ET AL.	
	Examiner	Art Unit	
	John L. Goff	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 22-34* is/are pending in the application.

4a) Of the above claim(s) *27-34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 22-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on 3/19/08.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 19 and 22-26 are rejected under 35 U.S.C. 102(b) as anticipated by Uetani et al. (U.S. Patent Application Publication 2001/0026905).

Uetani et al. disclose a method of producing a resist composition comprising a novolac resin and adding a solvent thereto. Uetani et al. teach the solvent consists of acetone which is a solvent having a boiling point in the range of about 30 °C to about 70 °C (Paragraphs 10 and 22).

The resist taught by Uetani et al. is considered "said adhesive composition with improved adhesive characteristics". The resist taught by Uetani et al. forms a resist film on a substrate following coating and drying such that because the resist film adheres to the substrate the resist is considered an adhesive (Paragraph 22). Additionally, as specifically noted by applicants specification in Table 1 a tradition resist is an adhesive composition. It is noted there is no specific requirement in the claims for any specific improved adhesive characteristics other than the characteristics are obtained by the addition of solvent wherein because the resist taught by Uetani et al. considered an adhesive which includes a solvent added thereto as required by the claims it is thus "said adhesive composition with improved adhesive characteristics".

Regarding the limitation "of producing an adhesive composition having improved adhesive characteristics for use in bonding a ceramic material to a manufacturing tool" as stated in the preamble, it is noted this limitation is merely the intended use of the produced composition and is given little weight to further limit the scope of the claims as no further structural limitations are required, it being noted the resist composition produced by Uetani et al. is capable of being used in this manner (See MPEP 2111.02).

4. Claims 19 and 22-26 are rejected under 35 U.S.C. 102(b) as anticipated by Teiichi et al. (WO 01/60938 with U.S. Patent Application Publication 2003/0069331 used as a translation).

Teiichi et al. disclose a method of producing an adhesive composition comprising an epoxy adhesive resin and adding a solvent thereto. Teiichi et al. teach the solvent consists of acetone which is a solvent having a boiling point between 30 °C and 70 °C (Paragraphs 1, 33, and 137).

The adhesive taught by Teiichi et al. is considered "said adhesive composition with improved adhesive characteristics". It is noted there is no specific requirement in the claims for any specific improved adhesive characteristics other than the characteristics are obtained by the addition of solvent wherein because the adhesive taught by Teiichi et al. includes a solvent added thereto as required by the claims it is thus "said adhesive composition with improved adhesive characteristics".

Regarding claim 23, Teiichi et al. teach the epoxy resin comprises novolac resin (Paragraph 33).

Regarding the limitation "of producing an adhesive composition having improved adhesive characteristics for use in bonding a ceramic material to a manufacturing tool" as stated

in the preamble, it is noted this limitation is merely the intended use of the produced composition and is given little weight to further limit the scope of the claims as no further structural limitations are required, it being noted the resist composition produced by Teiichi et al. is capable of being used in this manner (See MPEP 2111.02).

Claim Rejections - 35 USC § 103

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 15-20 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruiz (U.S. Patent 5,406,694) in view of Teiichi et al.

Ruiz discloses a method of forming a slider for a hard disk drive including providing a ceramic chunk (40 of Figure 6) from a wafer and bonding the air bearing side of the ceramic chunk to a ceramic manufacturing tool (50 of Figure 6) through a layer of thermoset adhesive (Figure 6 and Column 1, lines 6-8 and Column 5, lines 35-38 and Column 7, lines 38-49). Ruiz does not specifically describe using an adhesive including a solvent, it being noted Ruiz are not limited to any particular thermoset adhesive. Teiichi et al. disclose a method of producing a thermoset adhesive composition having excellent heat and moisture resistance with no

volatilization for bonding a ceramic substrate, e.g. a ceramic material, to another ceramic substrate, e.g. semiconductor chip, comprising an epoxy adhesive resin considered a resist adhesive resin, e.g. a novolac resin, and a solvent added thereto such as acetone considered a solvent having a boiling point between 30 °C and 70 °C where the composition does not include, i.e. excludes, solvents having a boiling point above about 70 °C (Paragraphs 1, 31, 33, 131, 137, 145, 152, and 155). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adhere the ceramic chunk to the ceramic manufacturing tool as taught by Ruiz using the thermoset adhesive including solvent used for adhering ceramic substrates together taught by Teiichi et al. which has excellent heat and moisture resistance with no volatilization.

Regarding the limitations of "the solvent has a boiling point in the range of about 30 °C and about 70 °C" and "wherein the composition excludes solvents having boiling points above about 70 °C", Teiichi et al. teach including a solvent chosen from a list including a number of solvents meeting the limitations including acetone, it being noted Teiichi et al. use a single solvent from the list. Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the particular solvents taught by Ruiz as modified by Teiichi et al. in the adhesive composition as the (only) solvent including a solvent having a boiling point in the range of about 30 °C to about 70 °C such as acetone as was specifically suggested by Teiichi et al.

Regarding the limitation of a "de-bondable adhesive composition", applicants specification states, "Similarly, the term "debondable" as in "debondable adhesive" refers to an adhesive that is capable of being completely removed from the surfaces of substrates bonded

thereby without damage to the substrates.". Applicants specification further demonstrates a number of adhesives all of which are debondable such as cyanoacrylate, i.e. super glue, and a traditional resist including novolac resin. As applicants specification demonstrates that adhesive compositions whose principal component is a novolac resin is debondable the adhesive taught by Teiichi et al. having the same principal component is considered debondable. Furthermore, it is noted the claims do not require a step of debonding the adhesive, the office is unequipped to test the adhesive for such a property, and any number of adhesives may be considered debondable including adhesives such as super glue an adhesive readily recognized to one of ordinary skill in the art as permanent and not a temporary adhesive such that absent a clear and sufficient showing the adhesive taught by Teiichi is considered debondable.

Regarding claim 20, Teiichi et al. do not specifically disclose the amount of resist adhesive resin in the adhesive composition. Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the particular resist adhesive resin content in Ruiz as modified by Teiichi et al. as a function of the heat and moisture resistance properties of the adhesive composition as doing so would have required nothing more than ordinary skill and routine experimentation.

7. Claims 1-5, 7-10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruiz and Teiichi et al. as applied to claims 15-20 and 22-26 above, and further in view of Tanaka et al. (U.S. Patent 4,376,194).

Ruiz and Teiichi et al. as applied above teach all of the limitations in claims 1-5, 7-10, and 12-14 except for a specific teaching of applying the adhesive composition to bond the ceramic chunk to the ceramic manufacturing tool by applying the adhesive composition to the

ceramic chunk, contacting the ceramic manufacturing tool with the adhesive composition on the surface of the ceramic chunk to bond the tool and chunk, and subjecting the adhesive composition located between the ceramic chunk and ceramic tool to conditions effective to remove the solvent from the adhesive. Ruiz is not limited to any particular method of applying the adhesive composition. Teiichi et al. suggest applying the adhesive composition to bond two substrates by first forming the adhesive composition into an adhesive film, placing the adhesive film, between the two substrates, and contacting the substrates and adhesive film to bond the two substrates, but Teiichi et al. are not limited to this method (Paragraph 148). It is considered well taken in the art of applying an adhesive composition including a solvent to bond two substrates to apply the adhesive composition to a first substrate, contacting a second substrate with the adhesive composition on the surface of the first substrate to bond the first and second substrates, and subjecting the adhesive composition located between the substrates to conditions effective remove the solvent from the adhesive as shown for example by Tanaka et al. (Column 8, lines 46-52) wherein Tanaka et al. also note as an alternative forming the adhesive into a film and then bonding the two substrates (Column 8, lines 20-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the adhesive composition as taught by Ruiz as modified by Teiichi et al. by applying the adhesive composition to the ceramic chunk, contacting the ceramic manufacturing tool with the adhesive composition on the surface of the ceramic chunk to bond the tool and chunk, and subjecting the adhesive composition located between the ceramic chunk and ceramic manufacturing tool to condition effective to remove the solvent from the adhesive as is well taken in the art and shown by Tanaka et al. to avoid the extra step of forming the adhesive composition into a film.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ruiz, Teiichi et al., and Tanaka et al. as applied to claims 1-5, 7-10, and 12-14 above, and further in view of Schafer (U.S. Patent 5,421,884).

Ruiz, Teiichi et al, and Tanaka et al. as applied above teach all of the limitations in claim 11 except for a specific teaching of using vacuum conditions to remove the solvent from between the ceramic chunk and ceramic manufacturing tool. Schafer is exemplary of the known technique for removing solvent from an adhesive in the microelectronics industry by applying vacuum and heat conditions to the adhesive to remove substantially all air bubbles and solvent inclusions within the adhesive (Column 1, lines 29-34 and Column 3, lines 30-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in Ruiz as modified by Teiichi et al. and Tanaka et al. vacuum conditions to remove the solvent from the adhesive as shown for example by Schafer to remove substantially all air bubbles and solvent inclusions within the adhesive.

9. Claims 1-6, 8, 9, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruiz in view of Asami et al. (JP 60221476 and see also the JPO and Derwent abstracts) and Tanaka et al.

Ruiz discloses a method of forming a slider for a hard disk drive including providing a ceramic chunk (40 of Figure 6) from a wafer and bonding the air bearing side of the ceramic chunk to a ceramic manufacturing tool (50 of Figure 6) through a layer of thermoset adhesive (Figure 6 and Column 1, lines 6-8 and Column 5, lines 35-38 and Column 7, lines 38-49). Ruiz does not specifically describe using an adhesive including a solvent, it being noted Ruiz are not limited to any particular thermoset adhesive. Asami et al. disclose a method of producing an

adhesive bonding composition considered a thermoset adhesive composition having excellent heat and solvent resistance comprising an acetate cellulose polymer resin considered a resist adhesive resin and a solvent added thereto such as methylethyl ketone considered a solvent having a boiling point between 30 °C and 80 °C where the composition does not include, i.e. excludes, solvents having a boiling point above about 80 °C (See the JPO and Derwent abstracts). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adhere the ceramic chunk to the ceramic manufacturing tool as taught by Ruiz using the thermoset adhesive including solvent taught by Asami et al. which has excellent heat and solvent resistance.

Regarding the limitation of "the solvent has a boiling point in the range of about 30 °C and about 80 °C" and "wherein the composition excludes solvents having boiling points above about 80 °C", Asami et al. teach including a solvent chosen from a list of two solvents at least one of which methylethyl ketone meets the limitations. Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the particular solvents as taught by Ruiz as modified by Asami et al. in the adhesive composition as the (only) solvent including a solvent having a boiling point in the range of about 30 °C to about 80 °C such as methylethyl ketone as was specifically suggested by Asami et al.

Regarding the limitation of a "de-bondable adhesive composition", applicants specification states, "Similarly, the term "debondable" as in "debondable adhesive" refers to an adhesive that is capable of being completely removed from the surfaces of substrates bonded thereby without damage to the substrates.". Applicants specification further demonstrates a number of adhesives all of which are debondable such as cyanoacrylate, i.e. super glue, and a

traditional resist including novolac resin. As applicants consider an adhesive composition whose principal component is a cellulose polymer as debondable the adhesive taught by Asami et al. having the same principal component is considered debondable. Furthermore, it is noted the claims do not require step of debonding the adhesive, the office is unequipped to test the adhesive for such a property, and any number of adhesives may be considered debondable including adhesives such as super glue an adhesive readily recognized to one of ordinary skill in the art as permanent and not a temporary adhesive such that absent a clear and sufficient showing the adhesive taught by Asami is considered debondable.

Ruiz and Asami et al. do not specifically teach applying the adhesive composition to bond the ceramic chunk to the ceramic manufacturing tool by applying the adhesive composition to the ceramic chunk, contacting the ceramic manufacturing tool with the adhesive composition on the surface of the ceramic chunk to bond the tool and chunk, and subjecting the adhesive composition located between the ceramic chunk and ceramic tool to conditions effective to remove the solvent from the adhesive, it being noted neither Ruiz or Asami et al. are limited to any particular application method. It is considered well taken in the art of applying an adhesive composition including a solvent to bond two substrates to apply the adhesive composition to a first substrate, contacting a second substrate with the adhesive composition on the surface of the first substrate to bond the first and second substrates, and subjecting the adhesive composition located between the substrates to conditions effective remove the solvent from the adhesive as shown for example by Tanaka et al. (Column 8, lines 46-52) wherein Tanaka et al. also note as an alternative forming the adhesive into a film and then bonding the two substrates (Column 8, lines 20-22). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to apply the adhesive composition as taught by Ruiz as modified by Asami et al. by applying the adhesive composition to the ceramic chunk, contacting the ceramic manufacturing tool with the adhesive composition on the surface of the ceramic chunk to bond the tool and chunk, and subjecting the adhesive composition located between the ceramic chunk and ceramic manufacturing tool to condition effective to remove the solvent from the adhesive as is well taken in the art and shown by Tanaka et al. to easily bond the ceramic chunk and ceramic manufacturing tool.

Regarding claims 2-4, Asami et al. do not specifically disclose the amount of resist adhesive resin in the adhesive composition. Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the particular resist adhesive resin content in Ruiz as modified by Asami et al. as a function of the heat and moisture resistance properties of the adhesive composition as doing so would have required nothing more than ordinary skill and routine experimentation.

Response to Arguments

10. Applicant's arguments with respect to claims 1-20 and 22-26 have been considered but are moot in view of the new ground(s) of rejection.

Applicants amendment has overcome the previous claim objections and rejections over Hacker et al. (U.S. Patent Application Publication 2002/0002265)

Applicants argue, "Hence, the Applicants would like to point out that the addition of the quinonediazide to the novolac resin changes the properties of the novolac resin. For instance, the presence of a photosensitive compound, such as quinonediazide, will impede dissolution and

thus is not suitable as a debondable adhesive. For example, as can be seen with reference to Example 2, set forth in the Applicants' specification, the addition of a photosensitizer to a novolac resist in the production of an adhesive resulted in a 75% loss in yield. Thus, the presence of the quinonediazide affects any inherent adhesiveness of the initial novolac resin and the overall composition produced as a whole. Accordingly, although Uetani discloses the production of a positive resist composition, there is no teaching in Uetani that indicates that the positive resist composition produced is an "adhesive composition".

Example 2 of applicants specification demonstrates the resist taught by Uetani is an adhesive composition as example 2 specifically shows a traditional resist including those comprising quinonediazide can be used as an adhesive.

Applicants argue, "The Office asserts that Teiichi teaches all the elements of the rejected claims because Teiichi discloses an epoxy resin combined with an acetone solvent. In support of this assertion, the Office points to paragraphs [0033] and [0137]. The applicants, however, disagree and contend that the Office has misconstrued the teachings of the cited reference. Although paragraph [0033] may disclose the use of an epoxy resin, and although paragraph [0137] may disclose the use of an acetone solvent, Teiichi when viewed as a whole does not disclose an adhesive composition that includes both a resist adhesive resin and a solvent that has a boiling point in the range of about 30° C to about 70° C. Rather, to the extent that Teiichi discloses combining an epoxy resin with a solvent to produce a composition, the epoxy resin is formulated as a film containing a polymer which film is dissolved in a solvent such as methyl ethyl ketone, toluene, and cyclohexanone. See paragraph [0131]. All of these solvents have a boiling point that is outside of the 30° C to about 70° C range recited in Claim 19. See Exhibit B.

Paragraph [0137], on the other hand, is not directed to producing a composition of an epoxy resin film dissolved in a solvent, but rather is directed to producing a varnish that may be used to coat a separate and removable support film, such as a plastic film. See paragraph [0133]. Thus, it is the varnish of the plastic support film that may include an acetone solvent, and not the epoxy resin/solvent film composition.".

Teiichi specifically discloses in paragraph 131, "The adhesive film of the present invention is obtained as an adhesive layer formed on a support film by a method in which the adhesive composition of the present invention is dissolved or dispensed in a solvent such as methyl ethyl ketone, toluene, cyclohexane, etc. to prepare a **varnish**, and the prepared varnish is coated to a support film such as polytetrafluoroethylene film or a polyethylene terepthalate film having a release-treated surface, and then heated and dried to remove the solvent." (Emphasis added).

Teiichi specifically discloses in paragraph 137, "The **solvent** for the **varnish** is not particularly limited, but, from the viewpoint of facilitating volatilization of the solvent during the film preparation, it is preferred to use a solvent having a relatively low boiling point such as methyl ethyl ketone, **acetone**, methyl isobutyl ketone, 1-ehtoxyethanol, toluene, xylene, butyl cellosolve, methanol, ethanol, 2-methoxyethanol, etc.".

From the above it appears clear Teiichi expressly discloses the adhesive film is formed by coating a varnish on a support which varnish comprises the adhesive, i.e. epoxy, and a relatively low boiling point solvent such as acetone.

Applicants further argue, "Contrary to the assertion of the Office, in the context provided above, Ruiz is in fact limited to the type of thermo-set adhesive that may be used as Ruiz

discloses that the thermo-set adhesive must be permanent. See column 7, lines 41-42, provided above. Accordingly, because the thermo-set adhesive in Ruiz is permanent, it is not de-bondable. Thus, using the rationale provided by the Office, if one were to combine Ruiz and Teiichi, one would still not arrive at the Applicants claimed invention, as the adhesive composition would be permanent and not de-bondable as claimed. Therefore, the Applicants contend for this reason alone *a prima facie* case of obviousness has not been presented.

The term "de-bondable" does not exclude adhesives considered permanent. Applicants specification states, "Similarly, the term "debondable" as in "debondable adhesive" refers to an adhesive that is ***capable of*** being completely removed from the surfaces of substrates bonded thereby without damage to the substrates." (Emphasis added). Ruiz does not disclose that a permanent adhesive are those incapable of being completely removed from the surfaces of substrates bonded thereby without damage to the substrates. Applicants specification further demonstrates a number of adhesives all of which are debondable such as cyanoacrylate, i.e. super glue, and a traditional resist including novolac resin. Applicants specification does not demonstrate any adhesives which are not considered de-bondable. As applicants specification demonstrates that adhesive compositions whose principal component is a novolac resin the adhesive taught by Teiichi et al. having the same principal component is considered debondable, i.e. capable of being completely removed from the surface of substrates bonded thereby without damage to the substrates. Furthermore, it is noted the claims do not require a step of debonding the adhesive, the office is unequipped to test the adhesive for such a property, and any number of adhesives may be considered debondable including adhesives such as super glue an adhesive readily recognized to one of ordinary skill in the art as permanent and not a temporary adhesive

such that absent a clear and sufficient showing the adhesive taught by Teiichi is considered debondable and the adhesive is considered readily used in Ruiz as set forth above.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John L. Goff/
Primary Examiner, Art Unit 1791